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Eliminating the Suffering and Death Due to Cancer

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New Test to Detect Recurrence of Bladder Cancer Begins Validation Study

A 3-year study to validate a sensitive and noninvasive test to detect the recurrence of bladder cancer has been initiated by the National Cancer Institute (NCI) at 12 centers across the United States and Canada. This test, conceived and conducted by NCI's Early Detection Research Network (EDRN), examines genetic changes in DNA obtained through urine samples. "This is the first study of its kind," says Dr. Sudhir Srivastava, who heads EDRN as chief of the Cancer Biomarkers Research Group in NCI's Division of Cancer Prevention. "It's the first study testing a marker for bladder cancer, and the first phase III study for an EDRN-created test."

EDRN, established by NCI in early 2000, is a broad, interdisciplinary consortium whose work is aimed at both identifying and validating cancer biomarkers for use in early cancer detection. Numerous proteins and genes have been linked with a variety of cancers, which makes them potential targets for identifying the risk of cancer onset, progression, or recurrence. The validation—proving that this link accurately signifies a risk for or presence of cancer—is the critical step in creating a truly useful test.

Bladder cancer is fairly common in the United States (around 60,000 new

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Director's Update

Cancer Centers: A Source of Hope and Confidence

In my position as NCI director, I continue to be heartened by the fervor in the cancer community for the daily progress we are making against this disease. Yesterday, I had the privilege to receive a double dose of this enthusiasm at the University of Colorado Cancer Center (UCCC), where I toured an impressive 12-story, 600,640-square foot, new cancer research facility at UCCC and participated in the Tour of Hope event being held there.

The day's activities featured Lance Armstrong and the entire 20-member Tour of Hope team, as well as one of the world's most preeminent lung cancer researchers, Dr. Paul Bunn. Dr. Bunn has directed UCCC since its inception in 1987, and also serves as the director of the NCI-funded lung cancer Specialized Program of Research Excellence (SPORE) at the center—one of six lung cancer SPOREs across the country. Dr. Bunn has been a tireless leader in the battle against cancer, taking his expertise beyond the laboratory and clinic to be a vocal proponent of antismoking campaigns and other activities to curb smoking. With a six-time Tour de France champion and a tour-de-force researcher/

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cases estimated for 2004) and has a high recurrence rate. Frequent surveillance of bladder cancer patients is critical, but current procedures have shortcomings. Urine cytology, which checks the number and appearance of cells in urine samples, often fails to detect early tumors. Cystoscopy, examining the urethra and bladder with a thin lighted scope, can give patients a false-positive result in addition to being invasive and unpleasant.

EDRN's bladder cancer test uses a technology known as microsatellite DNA analysis (MSA). Microsatellites, also known as short tandem repeats, are repeating units of one to six nucleotides found throughout human chromosomes. These repeating regions are frequently mutated in tumors, either through deletions or by an extension of the number of repeats. To screen for recurrent bladder cancer, DNA can be easily extracted from cells that are normally present in urine, and compared with DNA sequences of unaffected cells from the same patients. Early studies have shown this noninvasive analysis to be accurate more than 90 percent of the time.

In the validation study, overseen by Dr. Jacob Kagan, program director in NCI's Cancer Biomarkers Research Group, 15 different biomarkers in 300 patients diagnosed with bladder cancer will be examined in an effort to predict cancer recurrence. Individuals with healthy bladders and those with noncancerous bladder problems that could be misdiagnosed as cancer, such as kidney stones or urinary tract infections, will be used as controls. The participating institutions will collect samples from patients in this study, and the samples will be analyzed by Commonwealth Biotechnologies, Inc., located in Richmond, Va.

Final results of this study are expected in September 2007. After phase III validation, Cangen Biotechnologies Inc., which holds the license for this MSA test, plans to seek Food and Drug Administration approval to make the test available commercially. "While the primary goal of this study is to monitor MSA for bladder cancer recurrence," says Dr. Srivastava, "the longer term goal is to use the test for early detection of new bladder cancer occurrence."

EDRN is also working on two other early detection tests involving examination of protein biomarkers in blood serum to detect early tumors of the prostate and liver. ◆

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clinician on the same stage, it was a sterling example of the high-caliber team that has assembled to lead the fight against cancer.

The UCCC event also reinforced for me the Herculean success of our cancer centers program. As the only comprehensive cancer center in the Rocky Mountain region, for example, UCCC is a diverse, multidisciplinary, and cutting-edge research and treatment facility. More than 10,000 people are enrolled in cancer clinical trials at UCCC, from those participating in stage 1 treatment trials to patients who are part of some of the largest, multi-institutional prevention trials in the country.

Comprehensive cancer centers also are home to some of the most exquisite basic research being performed in the world today. Last year, for example, UCCC researchers led a team of investigators who developed the first detailed 3-D structure of the tumor antigen called large-T, a protein that has been heavily implicated in the development of virally developed tumors. With a better understanding of large-T's structure, researchers can more easily study how it functions and can develop agents to inhibit its tumor-promoting activity.

The emphasis on translating important research findings into everyday practice also is on display at many of our country's cancer centers. Based on research that has shown the strong benefits that exercise can have for cancer patients and survivors, UCCC is one of a number of cancer centers that now offer exercise programs to help patients reduce fatigue and boost their strength and sense of well-being during and after cancer treatment.

Reaching the 2015 goal will not only require increased collaboration among researchers from different disciplines, but also among cancer centers. NCI is committed to fostering such collaboration, through exciting new initiatives such as the cancer Biomedical Informatics Grid, the NCI Alliance for Nanotechnology in Cancer, and the Academic Public-Private Partnership Program, or AP4. Importantly, these initiatives also bring together cancer centers with industry and others in the public and private sectors to promote multidisciplinary research and advanced technology, with the goal of delivering new interventions to patients more quickly and efficiently.

There are currently 61 NCI-designated cancer centers and others in development. We expect to see accelerated progress in the complexity and diversity of the research they perform and services they provide. That expectation speaks to something more fundamental: a belief that we have the finest biomedical research establishment in the world and a confidence that, at our current pace, the ultimate goal of eliminating suffering and death due to cancer is within our grasp. ◆

Dr. Andrew C. von Eschenbach
Director, National Cancer Institute

Special Report

Transdisciplinary Tobacco Use Research Centers Awarded New Funding

The National Cancer Advisory Board recently approved new funding for NCI's Transdisciplinary Tobacco Use Research Center (TTURC) collaborative initiative, which awarded grants to seven research centers in 1999. The new investment, totaling almost $12 million, will be funded over the next 5 years by NCI, the National Institute on Drug Abuse (NIDA), and the National Institute on Alcohol Abuse and Alcoholism (NIAAA). The new group of centers and principal investigators includes: Brown University and the Miriam Hospital, Dr. Raymond Niaura; University of Wisconsin, Dr. Timothy B. Baker; Roswell Park Cancer Institute, Dr. K. Michael Cummings; University of Minnesota, Dr. Dorothy K. Hatsukami; University of Southern California, Dr. C. Anderson Johnson; University of Pennsylvania, Dr. Caryn E. Lerman; and Yale University, Dr. Stephanie S. O'Malley.

The seven new centers will study a range of topics, including genetic and psychosocial factors that influence tobacco use and addiction; effective smoking cessation treatments; molecules or genes that could affect tobacco exposure and disease risk; and the public health impact of regional and national tobacco control policies.

NCI Director Dr. Andrew von Eschenbach said, "Our support for TTURCs reflects recognition of the detrimental public health impact of tobacco use and the need for integrative transdisciplinary research." NCI cofunds all seven centers and has invested more than $7 million in the new initiative. Lung cancer, overwhelmingly caused by tobacco use, is the leading cause of cancer death in the United States.

"We know that smoking is highly addictive and exposes the body to thousands of compounds in tobacco smoke," said NIDA Director Dr. Nora D. Volkow. "NIDA is committed to funding research to reduce the adverse health, economic, and social consequences of all drugs of abuse, including nicotine, to individuals, families, and communities." NIDA cofunds three of the centers and has invested more than $3 million in the new initiative.

"Patterns of co-occurring alcohol and tobacco use and dependence warrant greater scrutiny," said NIAAA Director Dr. Ting-Kai Li. "We are pleased to be a new cofunder of this important research into the shared genetic and neurobiological vulnerabilities to both forms of dependence, as well as the environmental factors that influence use of these drugs." NIAAA has invested more than $1.5 million in the TTURC initiative.

People who smoke are influenced by behavioral, social, environmental, psychological, genetic, and biologic factors, many of which are interconnected. As shown by the diversity of collaborations and research outcomes since 1999, the TTURC initiative spans multiple perspectives and is leading to new strategies for addressing tobacco control. The Robert Wood Johnson Foundation has partnered with the original grantees to help disseminate research results. Highlights of important scientific findings from the original TTURC grants include:

- Researchers at the University of Pennsylvania this year published the first study to identify specific genes that may influence adolescent smoking progression in conjunction with psychological factors.
- Investigators at the University of California, Irvine (UCI) found that hostile, anxious, and depressed teens are more likely to smoke. But, a collaboration between the UCI and University of Southern California TTURCs revealed that such factors work differently in white and Asian youths: Hostility and depression are associated with smoking in white youths, but not Asian youths, who are more likely to smoke in social situations.
- Results from Brown University show that children of mothers who smoked a pack or more of cigarettes per day during pregnancy had a higher risk for nicotine dependence compared with children whose mothers did not smoke during pregnancy.
- Research at the Yale TTURC led to the development of a new radiotracer that will not only examine the effects of tobacco smoking on the brain, but also will allow researchers to explore the role of the nicotinic system in Alzheimer's disease, alcoholism, major depression, and schizophrenia.

For more information about TTURCs, visit http://cancercontrol.cancer.gov/tcrb/tturc. ◆

Cancer Research Highlights

Hodgkin's Survivor Gives Birth Following Ovarian Tissue Implant

For the first time, a woman who became sterile as a result of chemotherapy has given birth to a healthy baby following implantation of her own ovarian tissue, which had been cryopreserved before she underwent chemotherapy. The baby girl was born on September 23, approximately 7 years after the 32-year-old Belgian woman's initial chemotherapy treatment for Hodgkin's disease and 3 years after she had been cleared by her oncologists as disease free. "Our findings open new perspectives for young cancer patients facing premature ovarian failure," said lead investigator Dr. Jacques Donnez of the Catholic University of Louvain in Brussels. A report on the procedure that led to the birth was published on *The Lancet* Web site on September 24.

The patient presented with clinical stage IV Hodgkin's disease in 1997. Dr. Donnez's team took five biopsy samples via laparoscopy from the left ovary (12-15 mm long and 5 mm wide). One tissue strip was kept intact, while the remaining four were cut into smaller cubes. The tissue was frozen and stored for 7 years. Seven days before the actual tissue implantation, the team surgically created a small pocket, or "peritoneal window," near the woman's right ovary "The goal was to induce angiogenesis and neovascularization in this area," the authors explained. A week later, some of the thawed tissue samples were implanted. The remaining samples were implanted after 4 months, with signs of ovulatory activity several months later. In early 2004, the patient became pregnant by natural means.

Although the authors acknowledged there is a chance that the pregnancy did not originate from the transplanted tissue, they offered several lines of evidence to support that it was. In addition, they stressed that the procedure presents some ethical and medical considerations that must be addressed. "One major concern…is the potential risk that the frozen-thawed ovarian tissue might harbor malignant cells, which could induce a recurrence of disease after transplantation," they wrote in the paper. "Screening methods to detect minimal residual disease must be developed to eliminate risk of cancer cell transmission with reimplantation."

Artificial Neural Networks Can Predict Clinical Outcomes of Neuroblastoma Patients

Researchers at NCI, in collaboration with colleagues from Germany and Australia, have used artificial neural networks (ANNs) to successfully predict the clinical outcomes of patients diagnosed with neuroblastoma (NB). They also used the ANNs to identify a set of 19 genes whose expression levels were closely associated with outcome. The study, which appears in the October 1 *Cancer Research*, suggests the predictive power of ANNs could assist physicians in the treatment of individual patients, especially those considered high risk.

Dr. Javed Khan and his team at NCI's Pediatric Oncology Branch first used cDNA microarrays containing over 25,000 genes to create gene expression profiles of primary tumors from 49 NB patients with a known clinical outcome: good (event-free survival for more than 3 years) or poor (death due to disease). Next, they adapted an ANN algorithm—a specialized pattern recognition program modeled after the human brain—to identify patterns in tumor gene expression. They found that the ANN could predict the clinical outcome from any individual gene profile with about 88 percent accuracy. The researchers then optimized the profiles and found 19 genes whose expression could act as a predictor set. Using only these 19 genes, ANN accuracy increased to 95 percent.

"What was most exciting was that we were able to predict which high-risk patients would have good or poor outcomes," said Dr. Khan. "This has major clinical implications, since we are now able to distinguish a group of ultra-high-risk patients who will not respond to conventional therapy and therefore require alternative treatment. We may also be able to reduce the intensity of the treatment regimen to high-risk patients predicted to survive based on their gene expression profiles."

"Because we are using 19 genes instead of 25,000," he added, "we can translate our findings to the clinic because simple prognostic assays can be developed quickly, based on this small number of genes."

Antioxidant Supplements May Not Prevent GI Cancers

Populations with diets rich in antioxidants from fruits and vegetables show low rates of cancer and heart disease. But in a recent analysis of studies from the last 20 years involving people considered to be at high risk for gastrointestinal (GI) cancers, there was no significant link between antioxidant nutritional supplements and

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the prevention of digestive cancers. The study, sponsored by Denmark's Knowledge and Research Center for Alternative Medicine and the Copenhagen Trial Unit at the Centre for Clinical Intervention Research, is published in the October 2 issue of *The Lancet*.

The research team, led by Dr. Goran Bjelakovic of the University of Nis in Serbia and Montenegro, and colleagues at the Cochrane Hepato-Biliary Group, looked at 14 randomized trials that jointly involved more than 170,000 participants, where the supplements beta-carotene, vitamins A, C, and E, and selenium were compared, either alone or in combination, against a placebo. The results showed no link between antioxidants and digestive cancer prevention and, in half of the trials, there was a small increase in mortality among people who took the antioxidant supplements. Four of the trials, however, did show a possible link between selenium supplements and decreased risk for digestive cancers.

In an interview with the Associated Press, Dr. Bjelakovic deemed antioxidant pills (excepting selenium) as "useless for prevention of gastrointestinal cancers." But this type of analysis can be misleading, notes Dr. Peter Greenwald, director of NCI's Division of Cancer Prevention. "Analyzing all types of GI cancers together, when they have differing etiologic factors, is an oversimplification," says Dr. Greenwald. "When you look at the studies in each organ site, the relative risk for gastric cancer suggests a slight increase in risk from supplements, while the relative risk for colorectal cancer shows a tendency toward a decrease in risk." None of the results are statistically significant, but those trends suggest that antioxidant supplements may yet be useful in some kinds of GI cancers, he notes. ◆

Funding Opportunities

Bioengineering Approaches to Energy Balance and Obesity

HL-04-022
Letter of Intent Receipt Date: Jan.17, 2005
Application Receipt Dates: Feb. 16, 2005

The objective of this RFA is to encourage and enable bioengineering teams to develop and evaluate new technologies, instrumentation, and medical devices to better assess appropriate biomedical parameters and provide feedback and/or therapy to reduce the prevalence of obesity and overweight. Development of new technologies and application of existing technologies may be proposed. Examples of relevant technologies include, but are not limited to, imaging, diagnostic and therapeutic devices, direct and remote sensors, meters, microtransmitters, and biomaterials. Studies may include use of animal models and/or human participants but are not required to do so. If appropriate, plans for manufacturing and clinical evaluation of developed instrumentation and medical devices should be included in the application.

This funding opportunity will use the NIH R01 and R21 award mechanisms. For more information, see: http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=2280. Inquiries: Dr. Sharon Ross, sr75k@nih.gov; Dr. Audie A. Atienza, atienzaa@mail.nih.gov

Small Grants Program for Cancer Epidemiology

PAR-04-159
Application Receipt Dates: Nov. 21, 2005; March 20, July 20, Nov. 20, 2006; March 20, July 20, Nov. 20, 2007; March 20, July 21, Nov. 21, 2008

The proposed Program Announcement (PAR), using the R03 mechanism, is a re-issuance of the current *Small Grants Program for Cancer Epidemiology*, PAR-03-010, which focuses on etiologic cancer research and provides support for pilot projects, testing of new techniques, secondary analyses of existing data, and development of innovative projects that could provide a basis for more extended research. Investigators will be encouraged to propose epidemiologic studies using new approaches. High-priority areas in cancer epidemiology research have been identified by NCI-coordinated Progress Review Groups. Applicants submitting grant applications in response to this PAR will be encouraged to review these reports and consider research in these areas when planning future R01 grants, developing and validating measurement methods, and linking genetic polymorphisms with other variables related to cancer risk.

This PAR, which involves Institute-managed review and special receipt dates, will use the NIH small research project grants (R03) award mechanism. For more information, see: http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=2302. Inquiries: Dr. Mukesh Verma, vermam@mail.nih.gov

Manufacturing Processes of Medical, Dental, and Biological Technologies (SBIR/STTR)

PA-04-161
Application Receipt Dates: Dec. 1, 2004; April 1, Aug. 1, Dec. 1, 2005

The purpose of this Program Announcement (PA) is to solicit grant applications for the competing

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continuation of previously funded Phase II Small Business Innovation Research (SBIR)/ Small Business Technology Transfer (STTR) grants that propose to continue the process of developing products for commercialization and translation into the clinic. Such products include drugs, vaccines, radioligands, biomarkers, medical implants or devices, imaging protocols proposed for clinical use, new software for instrument performance, and diagnostic or predictive assays applicable for cancer diagnosis, prevention, and treatment. Activities supported by a competing continuation of an SBIR/STTR Phase II grant may include an extension and expansion of preclinical research and development, clinical testing, and other scientific research and development activities needed to meet the requirements and expectations of Federal regulatory agencies.

This PA uses the SBIR and STTR Grants award mechanisms, which are set-aside programs. For more information, see: http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=2300. Inquiries: Dr. Greg Downing, downing@mail.nih.gov ◆

CCR Grand Rounds

October 12: Dr. James H. Doroshow, Director, Division of Cancer Treatment and Diagnosis, NCI, "Reactive Oxygen Metabolism and the Anthracycline Antibiotic Cell Death Program"

October 19: Dr. Allan M. Weissman, Chief, Laboratory of Protein Dynamics and Signaling, CCR, NCI-Frederick, "Regulating the RINGs, the Battle for Protein Fate"

CCR Grand Rounds are held 8:30 to 9:30 a.m. at the NIH campus in Bethesda, Md., in the Clinical Center's Lipsett Auditorium. ◆

Featured Clinical Trial

Comparison of Chemotherapy Combinations for Colon Cancer

Name of the Trial
Phase III Randomized Study of Irinotecan (CPT-11) and/or Oxaliplatin (OXAL) Plus 5-Fluorouracil (5-FU)/Leucovorin (CF) with or without Cetuximab (C225) after Curative Resection for Patients with Stage III Colon Cancer (NCCTG-N0147). See the protocol summary at http://cancer.gov/clinicaltrials/NCCTG-N0147.

Principal Investigators
Dr. Steven Alberts and Dr. Frank Sinicrope, North Central Cancer Treatment Group

Why is This Trial Important?
Colon cancer is among the most common cancer types in the United States. Surgery is often used to treat colon cancer, but even with potentially curative surgery, some cancer cells can remain in the body, especially if cancer has spread to the surrounding lymph nodes (stage III colon cancer). To fight these cancer cells, doctors may treat patients with postoperative (adjuvant) chemotherapy. Biological agents, such as monoclonal antibodies, may also be added to the chemotherapy.

This trial will include six different treatment groups. Patients will be randomly assigned to receive one of three different combinations of chemotherapy with or without the monoclonal antibody cetuximab. Cetuximab targets a protein, epidermal growth factor receptor, that may help some types of cancer cells to grow.

"For patients with lymph node involvement, the recurrence rate after surgery is historically about 50 to 70 percent," said Dr. Alberts. "Traditional adjuvant chemotherapy with fluorouracil and leucovorin, however, has produced definite improvements. Our hope is that the more active agents now available to us will further reduce the risk of recurrence without producing a lot of additional side effects compared with current standard therapy.

"By comparing these different regimens, we hope to determine what will become the state of the art in adjuvant therapy for colon cancer," added Dr. Alberts.

Who Can Join This Trial?
Researchers want to enroll 4,800 patients aged 18 and over, diagnosed with stage III colon cancer, who have had their tumors surgically removed. See the complete list of eligibility criteria at http://cancer.gov/clinicaltrials/NCCTG-N0147.

Where Is This Trial Taking Place?
Multiple study sites in the United States are enrolling patients for this trial. See the full list of study sites at http://cancer.gov/clinicaltrials/NCCTG-N0147.

Who to Contact
See the list of study contacts at http://cancer.gov/clinicaltrials/NCCTG-N0147 or call the NCI's Cancer Information Service at 1-800-4-CANCER (1-800-422-6237). The call is toll free and completely confidential. ◆

An archive of "Featured Clinical Trial" columns is available at http://cancer.gov/clinicaltrials/ft-all-featured-trials.

Notes

Dr. David Hunter Appointed as NCI Eminent Scholar

Dr. David Hunter, Vincent L. Gregory Professor of Cancer Prevention at Harvard School of Public Health, has been appointed as an NCI Eminent Scholar in the Intramural Research Program (IRP). As part of an NCI initiative aimed at re-engineering the IRP, the Scholars Program was established to allow distinguished extramural scientists to work closely with intramural scientists in developing high-priority research programs and platforms.

In collaboration with investigators in the Division of Cancer Epidemiology and Genetics, as well as the Center for Cancer Research, Dr. Hunter will help develop strategies to apply emerging genomic and molecular technologies, including whole genome scans, to large-scale population studies designed to uncover common low-penetrant genes that predispose to cancer. The work will take place at the NCI Core Genotyping Facility, and should inform the strategic partnerships being developed in molecular epidemiology, such as the cohort and case-control consortia involving extramural-intramural collaborations that were described in the Feb. 24 issue of the *NCI Cancer Bulletin*.

Other NCI Eminent Scholars include Dr. Michael Sporn of Dartmouth Medical School, who is involved in an NIH-prevention initiative through CCR, and Dr. Mauro Ferrari of Ohio State University, who is helping to develop the Nanotechnology Alliance for NCI through the Office of Technology and Industrial Relations.

NCI Awards Outstanding Mentors and Mentors of Merit

NCI created the Outstanding Mentor Award in 2001 to recognize investigators who have shown an exceptional commitment to the next generation of scientists. This year's Outstanding Mentors are Dr. Daniel McVicar, Dr. Joost Oppenheim, and Dr. Stuart Rudikoff.

The Mentors of Merit are Dr. Shine Chang, Dr. Wong-Ho Chow, Dr. Adam Glick, Dr. Nancy Jenkins, Dr. Neal Copeland, Dr. Ilona Linnoila, Dr. Alan Perantoni, Dr. Paul Randazzo, and Dr. Michael Smith.

Investigators were nominated by their fellows, students, and other trainees according to criteria including the mentor's ability to provide clear expectations, open communication, a supportive work environment, credit and recognition for one's work, and preparation for future career development. The recipients will be honored officially at the NCI Awards Ceremony on October 28.

NCI Director Encourages Tour of Hope Riders

NCI Director Dr. Andrew von Eschenbach participated in two rallies for the second annual Tour of Hope, an 8-day, 3,500-mile cross-country bike ride that seeks to emphasize increased participation in cancer clinical trials. The first event took place at the Nevada Cancer Institute in Las Vegas on Oct. 2 and was followed by a rally at the University of Colorado Cancer Center on Oct. 4. At both events, Dr. von Eschenbach praised the riders for their courage and urged local communities to help spread the message about cancer research and the importance of clinical trials.

The Tour of Hope team, led by cancer survivor and six-time Tour de France winner Lance Armstrong, comprises other cancer survivors, researchers, nurses, physicians, and caregivers. The team will be welcomed into Washington, D.C., on October 9 by Lance Armstrong. Other dignitaries will also be on hand for the event, including Dr. von Eschenbach, Surgeon General Dr. Richard Carmona, and President's Cancer Panel Chair Dr. LaSalle Leffall. For more information about the grand finale, visit: www.tourofhope.org.

Grochow Leaving NCI

Dr. Louise B. Grochow, Investigational Drug Branch (IDB) chief, is leaving NCI to join AstraZeneca as global product medical director for emerging oncology products. She came to IDB after 20 years at Johns Hopkins University School of Medicine and has directed the largest cancer early drug development program in the world since 1999. Under her leadership, the early clinical trials programs were optimized to meet the challenges of evaluating targeted treatments for cancer. IDB is currently developing more than 150 new agents in more than 400 clinical trials. Dr. Anthony J. Murgo, a medical oncologist and hematologist, has been named IDB acting chief. He came to NCI in 1996 from the FDA's Division of Oncology Drug Products and has been heading IDB chemotherapy development since 2001. ◆

Featured Meetings

This is a list of selected scientific meetings sponsored by NCI and other organizations. For locations and times and a more complete list of scientific meetings, including NCI's weekly seminars and presentations open to the public, see the NCI Calendar of Scientific Meetings at http://calendar.cancer.gov.

NCI Advisory Committee Upcoming Meetings

Date	Advisory Committee
Nov. 1	President's Cancer Panel

Selected Upcoming Meetings of Interest

Date	Meeting	NCI Speakers
Oct. 6-7	Summit for Success Regional Conference	Dr. Andrew C. von Eschenbach, Director
Oct. 6-8	The Advancing Practice, Instruction, and Innovation Through Informatics Conference (APIII 2004)—Frontiers in Oncology and Pathology Informatics	Dr. Anna Barker, Deputy Director, Advanced Technologies and Strategic Partnerships; Dr. Jules Berman, Cancer Therapy Evaluation Program, Division of Cancer Treatment and Diagnosis; Dr. Ken Buetow, Director, NCI Center for Bioinformatics
Oct. 6-10	American Association for Cancer Research Special Conference: Advances in Proteomics in Cancer Research	Dr. J. Carl Barrett, Director, Center for Cancer Research; Dr. Sudhir Srivastava, Chief, Cancer Biomarkers Research Group, Division of Cancer Prevention; Dr. Lance A. Liotta, Chief, Laboratory of Pathology, Center for Cancer Research; Dr. Emanuel Petricoin, Co-Director, Clinical Proteomics Initiative, Center for Cancer Research; Dr. John N. Weinstein, Laboratory of Molecular Pharmacology, Center for Cancer Research
Oct. 7-10	American College of Radiology Imaging Network Semi-Annual Meeting	Dr. James H. Doroshow, Director, Division of Cancer Treatment and Diagnosis
Oct. 12-16	Third International Conference on Tumor Microenvironment: Progression, Therapy and Prevention	Dr. Dinah S. Singer, Director, Division of Cancer Biology

NCI Exhibits

NCI Exhibits are presented at various professional and society meetings. Further information about the NCI Exhibits program can be found at http://exhibits.cancer.gov.

This *NCI Cancer Bulletin* is produced by the National Cancer Institute (NCI). NCI, which was established in 1937, leads a national effort to eliminate the suffering and death due to cancer. Through basic and clinical biomedical research and training, NCI conducts and supports research that will lead to a future in which we can prevent cancer before it starts, identify cancers that do develop at the earliest stage, eliminate cancers through innovative treatment interventions, and biologically control those cancers that we cannot eliminate so they become manageable, chronic diseases.

For more information on cancer, call 1-800-4-CANCER or visit http://cancer.gov.

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